

ENVS 17

Marine Policy

Fall/2021

Class location: Fairchild 101

Class Meeting time(s): MWF 11:30-12:35 am

Instructor: D.G. Webster
Office Location: Fairchild 104/Zoom
Email: D.G.Webster@Dartmouth.edu
Office Hours: By appointment: <https://calendly.com/dgweb121>
X-hours: Tu 12:15-1:05 (Only used if needed b/c of canceled class)

Course Description

People use the oceans for transportation, recreation, food, mineral wealth, waste disposal, and many other important things. This course explores the most significant human-ocean interactions known today from two perspectives: science and policy. From the scientific perspective, students will learn about issues ranging from the physical effects of sea level rise to the biological impacts of pollution to the bioeconomic repercussions of overfishing. For each of the problems that are revealed by science, we will also critically evaluate relevant policy solutions to understand how institutional design can (or can't) enhance human interactions with the oceans. This includes insights into the politics surrounding oceans issues in the US and around the world.

Course Goals

- Identify ecosystem services and other benefits that humans derive from the oceans
- Recognize the major impacts of human activities on the oceans
- Understand how multiple impacts interact to amplify problems in the world's oceans
- Evaluate domestic and international policies related to the oceans
- Analyze the political and economic links between human-oceans interactions and marine policy

Teaching & Learning

This course is an introduction to oceans issues and policy and is designed to accommodate students with a wide range of academic backgrounds. Students will first study the processes that shape the coupled human and natural systems associated with a particular topic. This requires learning about many different aspects of each topic, including oceanographic, biological, social, economic, and political elements. Once they understand the topic, students will learn about potential solutions to topic-related problems. These can range from technological fixes to social institutions to government regulations. Readings and homework will give students some understanding of basic concepts or specific cases which will serve as a foundation for broader lectures/discussions in class.

Expectations

Readings: There is one textbook covering oceanography and marine biology for the course. Assigned sections of this book compliment readings regarding related policy issues. See the schedule for all

reading assignments. Policy readings will be completed via the Perusall.com app (more below). If you anticipate difficulties accessing the textbook or the readings please let the professor know as soon as possible.

Films: Policy can be heavily tied to public perceptions of marine problems, so many conservationists and other interest groups work to make the public more aware of the issues that they think are important. In order to both provide a more visceral understanding of the material covered and to see how different groups represent the issues, students are asked to watch one documentary each Week. Sometimes additional documentaries are included on regular class days; these should be treated like readings. Most of the assigned documentaries can be streamed via the Canvas > Course Media Gallery or through publicly available links (see list of films under “Text and Resources”). A few films may be assigned from streaming services like Netflix. Students are not expected to pay for access to any of the assigned films. If you do not have access to pay-for services, an alternative video will be made available. If you anticipate difficulties accessing any of these films please let the professor know as soon as possible.

Perusall Discussions (due Mondays & Wednesdays by 9 am): When completing policy readings, students will use the Perusall.com annotation tool to engage in asynchronous discussions that include: 1) questions and answers regarding the nature of the material, 2) linkages between the policy reading and other readings/videos assigned for the day, and 3) linkages between the readings for the day and lessons learned earlier in the course. Discussion participation will be graded based on the level of engagement with the readings for the day and the amount of synthesis provided as the course progresses. Each student will get 3 freebie annotations for the first half of the course and 3 for the second half. Of course, students should still do all of the readings but the freebies will provide flexibility during times of stress, illness, etc.

Community Essays (500 words, max): Fridays will start with a short discussion of the film for the week and then students will split up into small groups to discuss how specific communities are affected by the topic of the week. To prepare for these discussions, all students should write a short description of how a specific community is being affected by/finding ways to overcome some facet of the issue that we are describing in a given week. During the discussion, members should take turns describing the effects on their community before turning to a discussion of what the communities might learn from each other or from the material covered in class during the week. Community Essays are due by Friday at 9 am. Each student will receive 2 “load lighteners” on Community Essays; that is, two of the essays may be brief outlines or bulleted lists instead of full essays and will be graded pass/fail.

Place-Based Research Projects: Working in groups, students will apply what they learned throughout the term to a specific ecosystem and present their findings to the class. This could be a mangrove forest, coral reef, seagrass bed, lagoon, seamount, bay, or other region (see examples from your book for inspiration). The length of the presentation will depend on the number of groups but is usually 10-12 minutes, with some time for questions. Please select your group members carefully—the work will go more smoothly if you have similar habits (e.g. working in advance of deadlines, etc.). Presentations must be well-researched. Citations should be included on the slide where information is provided and a list of references should be included on the final slide. Primary criteria for grading are: 1)

how well the presentation integrates the concepts from class and 2) use of evidence including qualitative and quantitative data to support the group's analysis.

Because of Covid, I am also open to allowing students to work independently/in smaller groups and submit their work in alternative formats, such as video blogs, websites, or a traditional paper. Please let me know by the 6th week of the term (or as soon as possible) if you are interested in this option and we can work out the details.

Text and Resources

American Museum of Natural History. 2014. *Ocean: The Definitive Visual Guide*. New York: DK, 512 pp.

Policy Readings can be accessed through Perusall.com. See instructions under Assignments in Canvas

Films can be accessed through the Course Media Gallery on Canvas or through links/instructions provided in Assignments.

Grading

Class participation	5%
Perusall Discussions	30%
Community Essays	40%
Place Based Project	25%

NOTE: Grades calculated by Canvas will not be accurate. However, you can use this breakdown with the Canvas Gradebook scores to create your own estimates. I am also happy to provide estimates upon request.

COVID-19 Information

Attendance

You are expected to attend class in person unless you have made alternative arrangements due to illness, medical reasons, or the need to isolate due to COVID-19. For the health and safety of our class community, please: **do not attend class when you are sick**, nor when you have been instructed by Student Health Services to stay home.

You will be able to view recordings of class in Canvas if you are unable to attend class during a regular Monday or Wednesday session

If you are not able to attend on Fridays, recording of the video discussion will be available. You may work with a group to join them virtually for a community discussion or may contribute to your group's discussion asynchronously through the Canvas Discussion Board. Ideally, you would take a look at the posted essays and provide some comments/feedback prior to class on the day you are missing but if you are too ill, then it's fine to comment after class is over.

Safety

In accordance with [current College policy](#), all members of the Dartmouth community are required to wear a suitable face covering when indoors, regardless of vaccination status. This includes our classroom and other course-related locations, such as labs, studios, and office hours. If you need to take a quick

drink during class, please dip your mask briefly for each sip. Eating is never permitted in the classroom. (The only exception to the mask requirement is for students with an approved disability-related accommodation; see below.) If you do not have an accommodation and refuse to comply with masking or other safety protocols, I am obligated to assure that the Covid health and safety standards are followed, and you will be asked to leave the classroom. You remain subject to course attendance policies, and dismissal from class will result in an unexcused absence. If you refuse to comply with masking or other safety protocols, and to ensure the health and safety of our community, I am obligated to report you to the Dean's office for disciplinary action under Dartmouth's [Standards of Conduct](#). Additional COVID-19 protocols may emerge. Pay attention to emails from the senior administrators at the College.

[I will communicate any changes and their resulting implications for our class community.]

Accommodations

Students requesting disability-related accommodations and services for this course are required to register with Student Accessibility Services (SAS; [Getting Started with SAS webpage](#); student.accessibility.services@dartmouth.edu; 1-603-646-9900) and to request that an accommodation email be sent to me in advance of the need for an accommodation. Then, students should schedule a follow-up meeting with me to determine relevant details such as what role SAS or its [Testing Center](#) may play in accommodation implementation. This process works best for everyone when completed as early in the quarter as possible. If students have questions about whether they are eligible for accommodations or have concerns about the implementation of their accommodations, they should contact the SAS office. All inquiries and discussions will remain confidential.

Remote Learning (If Needed)

In case of another Covid-related lock-down, we will transition from in-person to on-line learning. Lectures will be presented remotely using Zoom on Mondays and Wednesdays. We will also use Zoom for discussion groups on Fridays. Students are expected to attend on-line during the regular course time unless they have some reason to miss class (e.g. illness or emergency) or arrange for asynchronous learning with the professor. Lectures will be recorded for students who are not able to attend, including students who face severe time-zone conflicts. Video, audio, and pdfs will be provided. Please let Prof. Webster know if you anticipate or experience any difficulties joining our Zoom sessions as soon as possible. The college provides a variety of resources to help with remote learning, including the DCAL remote learning portal:

(<https://services.dartmouth.edu/TDClient/1806/Portal/KB/ArticleDet?ID=103491>), and:

Zoom for Live Class Sessions guide: <https://sites.dartmouth.edu/teachremote/using-zoom-for-live-class-sessions/>

Zoom help pages: https://support.zoom.us/hc/en-us?flash_digest=a3375b3d44dab907f28ece6c4bc31fec5ab26164

ITC Learn Remotely page: <https://services.dartmouth.edu/TDClient/1806/Portal/KB/?CategoryID=17756>

ITC Knowledge Base Guides:
<https://services.dartmouth.edu/TDClient/1806/Portal/KB/Search?SearchText=%2523Zoom>

In general, students should treat the zoom meeting as they would a regular classroom. Web-cams should be on at all times. This may be difficult for some students given their living/learning environments, so some exceptions will be made in advance. As always, it is better to communicate any problems to the prof and/or TA sooner rather than later.

Other Important Information

Academic Honor

<http://www.dartmouth.edu/~reg/regulations/undergrad/acad-honor.html>

Mental Health

The academic environment at Dartmouth is challenging, our terms are intensive, and classes are not the only demanding part of your life, particularly in these difficult times. There are a number of resources available to you on campus to support your wellness, including:

- Your undergraduate dean (<http://www.dartmouth.edu/~upperde/>)
- Counseling and Human Development (<http://www.dartmouth.edu/~chd/>)
- The Student Wellness Center (<http://www.dartmouth.edu/~healthed/>).

Dick's house is also providing remote support for students during the covid crisis (<https://students.dartmouth.edu/health-service/counseling/about/clinical-services/counseling>). Crisis services are available to all actively enrolled students 24/7. The on-call counselor can be accessed Monday - Friday, 8 a.m. - 4 p.m. by calling the Counseling Center, 603-646-9442. After hours, the on-call counselor can be accessed by calling the Inpatient Nursing Department (IPD), 603-646-9440. I encourage you to use these resources to take care of yourself throughout the term, and to come speak to me if you experience any difficulties.

Student Needs

Students with disabilities enrolled in this course and who may need disability-related classroom/remote accommodations are encouraged to make an appointment to see me before the end of the second week of the term. All discussions will remain confidential, although the Student Accessibility Services office may be consulted to discuss appropriate implementation of any accommodation requested.

Student Accessibility Services: <http://www.dartmouth.edu/~accessibility/facstaff/>

Academic Skills Center: <http://www.dartmouth.edu/~acskills/>

The Academic Skills Center is open to the entire Dartmouth Community. Here are some common reasons why you might visit the ASC:

- You're getting B's but you want to get A's
- You don't feel comfortable talking in class
- You're attending class regularly but you feel like you're missing important points
- You feel like you're a slow reader
- You're spending hours studying for foreign language but still not "getting it"
- You feel like you don't have enough time to get everything done
- You're not sure how to take notes

- You want to sign up for a tutor or study group
- You're not sure if you should get tested for a learning disability

The Research Center for Writing, and Information Technology (RWIT):

<https://students.dartmouth.edu/rwit/>

The Student Center for Research, Writing, and Information Technology (RWIT) is a place where you can meet with an undergraduate tutor to discuss a paper, research project, or multi-media assignment. The RWIT tutors are trained to help you at any phase of your process. Whether you are brainstorming or planning, drafting or structuring, tweaking or polishing, the RWIT tutors can provide feedback that will help you to create final products of which you can be proud.

Title IX

At Dartmouth, we value integrity, responsibility, and respect for the rights and interests of others, all central to our Principles of Community. We are dedicated to establishing and maintaining a safe and inclusive campus where all have equal access to the educational and employment opportunities Dartmouth offers. We strive to promote an environment of sexual respect, safety, and well-being. In its policies and standards, Dartmouth demonstrates unequivocally that sexual assault, gender-based harassment, domestic violence, dating violence, and stalking are not tolerated in our community.

The Sexual Respect Website (<https://sexual-respect.dartmouth.edu>) at Dartmouth provides a wealth of information on your rights with regard to sexual respect and resources that are available to all in our community.

Please note that faculty and TAs are obligated to share disclosures regarding conduct under Title IX with Dartmouth's Title IX Coordinator. Confidential resources are also available, and include licensed medical or counseling professionals (e.g., a licensed psychologist), staff members of organizations recognized as rape crisis centers under state law (such as WISE), and ordained clergy (see https://dartgo.org/titleix_resources).

Should you have any questions, please feel free to contact Dartmouth's Title IX Coordinator or the Deputy Title IX Coordinator for the Guarini School. Their contact information can be found on the sexual respect website at: <https://sexual-respect.dartmouth.edu>.

Schedule (HIB = Human Impacts Box)

		Issues	Ocean readings (textbook)	Policy readings (Canvas)
13-Sep	M	Introduction I	Read the Syllabus!	
15-Sep	W	Introduction II	Origins 43-47; Life 205-219; History of Life 226-229	https://www.un.org/sustainabledevelopment/oceans/
17-Sep	F	Communities I	Blue Planet II: Green Seas	
20-Sep	M	Development I	coasts 92-129; waves and tides 75-83	Keegan 2020
22-Sep	W	Development II	Blue Planet II: Coasts	Armstrong et al. 2016
24-Sep	F	Communities II	Mangroves, Guardians of the Coast; Higher Ground, Battle for Florida's Beaches	

27-Sep	M	Mining I	geology 48-51; cotinental shelves 140-141; small, bottom-living phyla 313-316; HIBox 159; Video: When Your Land is Stolen...	Pearce 2017
29-Sep	W	Mining II	abyss 171-173; slope 176-177; cold water reefs 178-179; ocean floor 180-189; Video: Endeavour Hydrothermal Vents	Nautilus 2008; Greenpeace 2013
1-Oct	F	Communities III	Alaska Gold	
4-Oct	M	Pollution I	water 29-37; currents 58-59; water cycle 64-65; HIBox 141, 164; bacteria, chromists, plants 230-253	Johnson and Harrison 2015
6-Oct	W	Pollution II	Plastic Ocean	Chen et al 2012
8-Oct	F	Communities IV	After the Spill: the Last Catch	
11-Oct	M	Artisanal Fisheries	seabeds 142-145; animal life 256-257; arthropods 290-304;	Christy 1992
13-Oct	W	Aquaculture	mangroves 130-137; seagrass n kelp 146-151; mollusks 276-289; HIBox 296, 336, 346	Granada et al 2015
15-Oct	F	Communities V	Strange Days: Dangerous Catch	
18-Oct	M	Commercial Fisheries I	pelagic zone 164-165; open ocean 167-170; semounts 174-175; from space 186-187; migrations 220-221; bony fishes 336-367; fishing 354-355; HIBox 215, 322, 379, 386, 408	Fritz 1998
20-Oct	W	Commercial Fisheries II	Blue Planet II: Big Blue	Sherwood 2018
22-Oct	F	Communities VI	Bluefin	
25-Oct	M	Blue Economy I	winds 54-55; racing 56-57; surfing 77, 110; kayaking 82; ATVs 113; whale watching 123; HIBox 149, 260, 335; diving 157, 474-475; birds 378-399	World Bank 2017
27-Oct	W	Blue Economy II	sharks, etc. 322-335; reptiles 368-377; birds 378-399; mammals 400-419	Nash 2009
29-Oct	F	Communities VII	Mexico Pelagico	
1-Nov	M	Climate Change I	oceans and climate (66-73); coasts and climate (88-91);	Gibbs 2016

3-Nov	W	Climate Change II	polar oceans 191-201; reefs 152-163; Chasing Coral (Netflix) ; ALT: Blue Planet II: Coral Reefs	Mosby 2020; Regan 2020
5-Nov	F	Communities VIII	Eyewitness to Change; Island Next Door; Our Islands Our Home	
8-Nov	M	Other International Issues	living deep 222-225; deep sea fish 347, 350-353; Blue Planet II: The Deep (2017; 48 m)	De Santo et al 2019
10-Nov	W	Place-Based Presentations I		
12-Nov	F	Place-Based Presentations II		
15-Nov	M	Place-Based Presentations III, Wrap up Class		